



Log No. **130 Revised**

**TAG Revision 7/16/21**

STATE OF WASHINGTON

## STATE BUILDING CODE COUNCIL

### 2015 Washington State Energy Code Development Energy Code Proposal Short Form

For editorial **Coordination, Clarifications & Corrections** only,  
without substantive energy or cost impacts

Code being amended: ☒ **Commercial** Provisions ☐ **Residential** Provisions  
(A MS Word version of the code is linked to the name)

Code Section # C402.1.1.2

Brief Description:

New exceptions in 2018 accidentally allow “semi-heated” space to have unlimited capacity of cooling disabled heat pumps and electric resistance infrared heat. Zonal infrared heaters are localized in their impact so could be installed throughout the warehouse. Zonal heat pumps can also said to be localized. This is a significant rollback in code for buildings willing to install electric resistance infrared heating. This exception was created to allow electric heat beyond electric resistance. The heat capacity limit and control provisions need to still be enforced. Heat pumps are not a form of electric resistance heat, so do not need to be listed but this has been left in the text below.

An alternative would be to drop the exceptions and allow exclude specific types of electric resistance heating in the code text. Electric convective heater, electric furnace, duct heater, baseboard, low temperature infrared/radiant. Or even just allow electric resistance.

Proposed code change text: (Copy the existing text from the Integrated Draft, linked above, and then use underline for new text and ~~strikeout~~ for text to be deleted.)

**C402.1.1.2 Semi-heated buildings and spaces.** The building envelope of *semi-heated* buildings, or portions thereof, shall comply with the same requirements as that for conditioned spaces in Section C402, except as modified by this section. The total installed output capacity of mechanical space conditioning systems serving a *semi-heated* building or space shall comply with Section C202. Building envelope assemblies separating conditioned space from semi-heated space shall comply with the exterior envelope insulation requirements. Semi-heated spaces ~~heated by mechanical systems that do not include electric resistance heating equipment~~ are not required to comply with the opaque wall insulation provisions of Section C402.2.3 for walls that separate semi-heated spaces from the exterior or low energy spaces. Fenestration that forms part of the building thermal envelope enclosing semi-heated spaces shall comply with Section C402.4. Semi-heated spaces shall be calculated separately from other conditioned spaces for compliance purposes.

Opaque walls in semi-heated spaces shall be calculated as fully code compliant opaque walls for both the target and proposed for the Target UA calculations for the component performance alternative in Section C402.1.5, and for the Standard Reference Baseline Building Design for Total Building Performance compliance per Section C407. The capacity of heat trace temperature maintenance systems complying with Section C404.7.2 that are provided for freeze protection of piping and equipment only, shall not be included in the total installed output capacity of mechanical space conditioning systems.

**Exception:** Provided the total installed heating and cooling output capacity of mechanical space conditioning does not exceed the criteria for semi-heated space as defined in Section C202, a semi-heated Bbuilding or space may comply as semi-heated with this section when served by one or more of the following mechanical systems alternatives:

- ~~1. Electric infrared heating equipment for localized heating applications.~~
- ~~2.1 Heat pumps without electric resistance back up and with cooling capacity permanently disabled connected to a heating only thermostat, as pre-approved by the jurisdiction.~~

Purpose of code change:

Clarify that exception only relates to the allowed heat source and does not allow unlimited heat capacity.

|                    |                           |               |                            |
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